



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-0387; Project Identifier AD-2021-01225-R; Amendment 39-22069; AD 2022-11-19]

RIN 2120-AA64

Airworthiness Directives; Bell Textron Inc. Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Bell Textron Inc. Model 212, 412, 412CF, and 412EP helicopters. This AD was prompted by a report of a cracked check valve. This AD requires inspecting certain engine oil and fuel check valves, and depending on the results, repetitively inspecting and removing the check valve from service. This AD also prohibits installing affected engine oil and fuel check valves on any helicopter. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For service information identified in this final rule, contact Bell Textron, Inc., P.O. Box 482, Fort Worth, TX, 76101, United States; phone 1-450-437-2862 or (800) 363-8023; email: productsupport@bellflight.com; website: <https://www.bellflight.com/support/>. You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call (817) 222-5110.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2022-0387; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket

contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Kuethe Harmon, Safety Management Program Manager, Certification & Program Management Section, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5198; email kuethe.harmon@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to Bell Textron Inc. Model 212, 412, 412CF, and 412EP helicopters with an engine oil check valve part number (P/N) 209-062-520-001 or fuel check valve P/N 209-062-607-001 manufactured by CIRCOR Aerospace that is marked “Circle Seal” and “CORONA CA,” except not a check valve marked with “TQL,” and has a manufacturing date code of, or prior to, “9/11” (September 2011), or does not have a manufacturing date code, installed. The NPRM published in the *Federal Register* on March 31, 2022 (87 FR 18747). The NPRM was prompted by report of a cracked check valve manufactured in 2009 by CIRCOR Aerospace. An incorrect torque value applied on the threaded fitting at the check valve inlet end during the assembly process resulted in the crack. Indication of this condition may also include an enlarged outside diameter (O.D.) measurement of the check valve housing at the inlet end where the threaded fitting is installed or a leak. These check valves may be installed as engine oil check valve P/N 209-062-520-001 and fuel check valve P/N 209-062-607-001 on Bell Textron Inc. Model 212, 412, 412CF, and 412EP helicopters.

The FAA previously issued AD 2019-09-02, Amendment 39-19636 (84 FR 22695, May 20, 2019), which applies to the same model helicopters with the same part-numbered check valves installed, except it is only for check valves marked “Circle Seal” and with a manufacturing date code of “10/11” (October 2011) through “03/15” (March 2015).

In the NPRM, the FAA proposed to require measuring the O.D. of an affected (engine oil or fuel) check valve housing at the center and at the inlet end where the threaded fitting is installed. If the dimension measured at the inlet end is greater than 0.003 inch (0.0762 mm) compared to the measurement at the center, the NPRM proposed to require repetitively inspecting the check valve for a crack and leak, and depending on the results, removing the check valve from service. The NPRM also proposed to require removing the check valve from service at a longer compliance time, which would terminate the repetitive inspections. Lastly, the NPRM proposed to prohibit installing affected check valves on any helicopter.

Discussion of Final Airworthiness Directive

Comments

The FAA received no comments on the NPRM or on the determination of the costs.

Conclusion

The FAA reviewed the relevant data and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, this AD is adopted as proposed in the NPRM.

Related Service Information

The FAA reviewed Bell Alert Service Bulletin (ASB) 212-20-163, Revision B, dated April 6, 2021 (ASB 212-20-163), Bell ASB 212-20-164, Revision B, dated April 6, 2021 (ASB 212-20-164), Bell ASB 412-20-182, Revision B, dated April 6, 2021 (ASB 412-20-182), and Bell ASB 412-20-183, Revision C, dated April 6, 2021 (ASB 412-20-183). ASB 212-20-163 and ASB 412-20-182 specify procedures for inspecting and replacing engine oil check valve P/N 209-062-520-001. ASB 212-20-164 and ASB 412-20-183 specify procedures for inspecting and replacing fuel check valve P/N 209-062-607-001.

Costs of Compliance

The FAA estimates that this AD affects 169 helicopters of U.S. registry. Labor rates are estimated at \$85 per work-hour. Based on these numbers, the FAA estimates the

following costs to comply with this AD.

Measuring up to four check valves (two engine oil and two fuel) takes about 1 work-hour for an estimated cost of up to \$85 per helicopter and \$14,365 for the U.S. fleet. Inspecting up to four check valves (two engine oil and two fuel) takes about 2 work-hours for an estimated cost of up to \$170 per helicopter and \$28,730 for the U.S. fleet, per inspection cycle as applicable. Replacing up to four valves (two engine oil and two fuel) takes about 4 work-hours and parts cost up to about \$340, for an estimated cost of up to \$680 per helicopter and \$114,920 for the U.S. fleet.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

2022-11-19 Bell Textron Inc.: Amendment 39-22069; Docket No. FAA-2022-0387; Project Identifier AD-2021-01225-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Bell Textron Inc. Model 212, 412, 412CF, and 412EP helicopters, certificated in any category, with an engine oil check valve part number (P/N) 209-062-520-001 or fuel check valve P/N 209-062-607-001 manufactured by Circor Aerospace that:

(1) Is marked “Circle Seal” and “CORONA CA,” except not a check valve marked with “TQL,” and

(2) Has a manufacturing date code of, or prior to, “9/11” (September 2011), or does not have a manufacturing date code, installed.

(d) Subject

Joint Aircraft System Component (JASC) Code: 2800 Aircraft Fuel System and

7900 Engine Oil System (Airframe).

(e) Unsafe Condition

This AD was prompted by a report of a cracked check valve. The FAA is issuing this AD to detect a cracked check valve. The unsafe condition, if not addressed, could result in loss of lubrication or fuel to the engine, failure of the engine or a fire, and subsequent loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Within 25 hours time-in-service (TIS) or 30 days, whichever occurs first after the effective date of this AD, using a caliper or equivalent, measure the outside diameter (O.D.) of the check valve housing at the center, and the O.D. of the check valve housing at the inlet end where the threaded fitting is installed. If the dimension measured at the inlet end is greater than 0.003 inch (0.0762 mm) compared to the measurement at the center, do the following:

(i) Before further flight, and thereafter at intervals not to exceed 25 hours TIS or 30 days, whichever occurs first, using a flashlight, visually inspect the check valve for a crack and leak, paying particular attention to the area at the inlet end where the threaded fitting is installed. If there is a crack or leak, before further flight, remove the check valve from service. Removing the check valve from service terminates the repetitive inspections required by this AD for that check valve.

(ii) Within 600 hours TIS or 12 months, whichever occurs first, remove the check valve from service. Removing the check valve from service terminates the repetitive inspections required by this AD for that check valve.

(2) As of the effective date of this AD, do not install an engine oil or fuel check valve identified in paragraph (c) of this AD on any helicopter.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, DSCO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards

District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i) of this AD. Information may be emailed to: 9-ASW-190-COS@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

For more information about this AD, contact Kuethe Harmon, Safety Management Program Manager, Certification & Program Management Section, DSCO Branch, Compliance & Airworthiness Division, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone (817) 222-5198; email kuethe.harmon@faa.gov.

(j) Material Incorporated by Reference

None.

Issued on May 25, 2022.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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